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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,589	10/17/2001	Tuomo Hokkanen	975.365USW1	7571

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EXAMINER	
YUN, EUGENE	

ART UNIT	PAPER NUMBER
2682	21

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/982,589	HOKKANEN, TUOMO	
	Examiner	Art Unit	
	Eugene Yun	2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 27-51 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 27-51 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 17 October 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 27-38 and 43-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dennison et al. (US 5,546,445) in view of Kim (US 6,208,631).

Referring to Claim 27, Dennison teaches a method for performing a handover procedure for a mobile station communicating in a communication network and being movable therein, said communication network comprising a plurality of base transceiver stations being adapted to perform a communication with said mobile station within a coverage area of a respective one of said base transceiver stations (see ABSTRACT), said method comprising the steps of:

processing location information related to the mobile station by comparing position information of the mobile station with position information related to the base transceiver stations (see col. 6, lines 54-63);

designating a next base transceiver station in said communication network, to which the communication with said mobile station is to be directed from a current base transceiver station (see col. 5, lines 39-42);

triggering a handover of the communication connection of the mobile station from the current base transceiver station to the next base transceiver station designated in said designating step (see col. 5, lines 55-56); and

performing the handover (see col. 5, lines 42-43).

Dennison does not teach deciding on the basis of the result of said processing of said location information, whether a first handover condition based on said location information is fulfilled or not, wherein said first handover condition is based on said location information and indicates that a handover is necessary for establishing or maintaining the communication between the mobile station and the communication network, when the first handover condition is not fulfilled, checking subscriber specifications, whether or not another measurement, which is related to a handover and is not based on said location information is to be performed, wherein said another measurement results in a determination of a second handover condition indicating that a handover is necessary for establishing or maintaining the communication between the mobile station and the communication network. Kim teaches deciding on the basis of the result of said processing of said location information (see s160 of fig. 2), whether a first handover condition based on said location information is fulfilled or not, wherein said first handover condition is based on said location information and indicates that a handover is necessary for establishing or maintaining the communication between the mobile station and the communication network (see s180 in fig. 2), when the first handover condition is not fulfilled, checking subscriber specifications, whether or not another measurement, which is related to a handover and is not based on said location

information is to be performed (see s170 of fig. 2), wherein said another measurement results in a determination of a second handover condition indicating that a handover is necessary for establishing or maintaining the communication between the mobile station and the communication network (see s190 of fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Kim to said method of Dennison in order to better ensure solid handoffs between base stations while avoiding ping-ponging.

Referring to Claim 43, Dennison teaches a device for controlling a handover procedure for a mobile station communicating in a communication network and being movable therein, said communication network comprising a plurality of base transceiver stations being adapted to perform a communication with said mobile station within a coverage area of a respective one of said base transceiver stations (see ABSTRACT), said device comprising:

a processing means for processing location information related to said mobile station by comparing position information of the mobile station with position information related to the base transceiver stations (see col. 6, lines 54-63);

a designating means for designating a next base transceiver station in said communication network, to which the communication with said mobile station is to be directed from a current base transceiver station (see col. 5, lines 39-42); and

a triggering means for triggering a handover of the communication connection of the mobile station from the current base transceiver station to the next base transceiver station designated by said designating means (see col. 5, lines 55-56).

Dennison does not teach deciding on the basis of the result of said processing of said location information, whether a first handover condition based on said location information is fulfilled or not, wherein said first handover condition is based on said location information and indicates that a handover is necessary for establishing or maintaining the communication between the mobile station and the communication network, when the first handover condition is not fulfilled, checking subscriber specifications, whether or not another measurement, which is related to a handover and is not based on said location information is to be performed, wherein said another measurement results in a determination of a second handover condition indicating that a handover is necessary for establishing or maintaining the communication between the mobile station and the communication network. Kim teaches deciding on the basis of the result of said processing of said location information (see s160 of fig. 2), whether a first handover condition based on said location information is fulfilled or not, wherein said first handover condition is based on said location information and indicates that a handover is necessary for establishing or maintaining the communication between the mobile station and the communication network (see s180 in fig. 2), when the first handover condition is not fulfilled, checking subscriber specifications, whether or not another measurement, which is related to a handover and is not based on said location information is to be performed (see s170 of fig. 2), wherein said another measurement results in a determination of a second handover condition indicating that a handover is necessary for establishing or maintaining the communication between the mobile station and the communication network (see s190 of fig. 2). Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Kim to said method of Dennison in order to better ensure solid handoffs between base stations while avoiding ping-ponging.

Referring to Claims 28 and 44, Dennison also teaches at least one additional parameter processed together with said location information related to the mobile station and position information related to the base transceiver stations (see second half of ABSTRACT).

Referring to Claims 29 and 45, Dennison also teaches said additional parameter based on signal quality (see last sentence of ABSTRACT).

Referring to Claims 30 and 46, Dennison also teaches determining said location information related to the mobile station and transmitting said determined location to a respective network device adapted to perform said processing step (see col. 5, lines 31-36).

Referring to Claim 31, Dennison also teaches said step of determining said location information related to the mobile station executed in the mobile station (see col. 6, lines 11-22).

Referring to Claim 32, Dennison also teaches said step of determining said location information related to the mobile station executed in a network element on the network infrastructure side (see col. 5, lines 27-32).

Referring to Claims 33 and 50, Dennison also teaches determining said location information related to the mobile station based on the method of locating by a global positioning system (see col. 5, lines 24-25).

Referring to Claim 34, Dennison also teaches said location obtaining step executed periodically (see col. 8, lines 1-4).

Referring to Claims 35 and 36, Dennison also teaches said location obtaining step executed upon predetermined occasions wherein said predetermined occasion is an attachment procedure of the mobile station to the communication network (see col. 5, lines 27-31).

Referring to Claims 37 and 51, Dennison also teaches checking whether a further measurement is to be performed, selecting a type of further measurement, if a measurement is to be performed, executing the measurement selected in said selected step, verifying whether a measurement result represents a second handover condition, and if the result of said verifying step represents the second handover condition, initiating execution of said target cell designation step for performing the handover (all in fig. 11B).

Referring to Claim 38, Dennison also teaches the coverage area of the base transceiver station designated in said designating step and to which the communication connection is to be directed as a coverage area adjacent to the coverage area of the current base transceiver station (see fig. 1).

Referring to Claim 47, Dennison also teaches a memory means 30 (fig. 8) for memorizing location information related to the mobile station and position information related to the base transceiver stations.

Referring to Claim 48, Dennison also teaches said means for determining location information related to the mobile station and for transmitting said determined

location information to a respective network device performing said processing located in the mobile station (see col. 6, lines 11-22).

Referring to Claim 49, Dennison also teaches said means for determining location information related to the mobile station and for transmitting said determined location information to a respective network device performing said processing located in a network element on the network infrastructure side (see col. 5, lines 27-32).

3. Claims 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dennison and Kim in view of Menich (WO 93/19560).

Referring to Claim 39, the combination of Dennison and Kim does not teach the coverage area of the base transceiver station designated in said designating step and to which the communication connection is to be directed as a coverage area not adjacent to the coverage area of the current base transceiver station. Menich teaches the coverage area of the base transceiver station designated in said designating step and to which the communication connection is to be directed as a coverage area not adjacent to the coverage area of the current base transceiver station (see ABSTRACT). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Menich to said method of Dennison in order to reduce unnecessary power waste in a communication network.

Referring to Claim 40, Menich also teaches the coverage area not adjacent to the coverage area of the current base transceiver station to which the communication

connection is to be directed is known to the communication network (see pg. 5, lines 9-11).

Referring to Claim 41, Menich also teaches the base transceiver station with the coverage area not adjacent to the coverage area of the current base transceiver station, to which the communication connection is to be directed, is a predetermined base transceiver station (see pg. 5, lines 11-14).

Referring to Claim 42, Menich also teaches the position information of the predetermined base transceiver station stored in the mobile station (see pg. 7, lines 1-6).

Response to Arguments

4. Applicant's arguments with respect to claims 27-51 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Yun whose telephone number is (703) 305-2689. The examiner can normally be reached on 8:30am-5:30pm Alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (703) 308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eugene Yun
Examiner
Art Unit 2682

EY

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